

# Mineral Industry Surveys

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For information, contact:

John W. Blossom, Molybdenum Commodity Specialist  
U.S. Geological Survey  
989 National Center  
Reston, VA 20192  
Telephone: (703) 648-4964, Fax: (703) 648-7757  
E-mail: [jblossom@usgs.gov](mailto:jblossom@usgs.gov)

Barbara J. McNair (Data)  
Telephone: (703) 648-7952  
Fax: (703) 648-7975

MINES FaxBack: (703) 648-4999  
Internet: <http://minerals.usgs.gov/minerals>

## **MOLYBDENUM IN JULY 1999**

Domestic production of molybdenum in concentrate in July 1999 was about 5% less than that of the previous month and was 10% less than that of July 1998, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were 14,000 metric tons at the beginning of 1999 and 15,500 metric tons at the end of July 1999.

Included in this Mineral Industry Surveys are U.S. production, shipments, and stocks of molybdenum concentrates and materials, plus U.S. consumption, by end use, of molybdenum in the previous and current months; also included are trade data for the previous month. During the current month, Platt's Metals Week

U.S. monthly average price for molybdenum concentrate was \$3.748 per kilogram (\$1.700 per pound). The average price for dealer molybdenum oxide was \$5.762 per kilogram (\$2.614 per pound), and that for dealer ferromolybdenum was \$8.019 per kilogram (\$3.638 per pound).

For the week ending September 17, 1999, Metals Week U.S. average price for molybdenum concentrate was \$3.748 per kilogram (\$1.700 per pound). The average price for dealer molybdenum oxide was \$6.063 per kilogram (\$2.750 per pound), and that for ferromolybdenum was \$8.167 per kilogram (\$3.700 per pound).

TABLE 1  
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS 1/

(Metric tons, contained molybdenum)

	1998 p/ January- December	1999		Year to date
		June	July	
Production	53,300	3,880 r/	3,670 r/	28,700
Shipments:2/				
Domestic	34,300	2,750 r/	3,330 r/	22,600
Export	17,800	1,160	495	6,890

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits.

2/ Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 2  
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS 1/

(Metric tons, contained molybdenum)

	1998 p/ January- December	1999		Year to date
		June	July	
Gross production	57,200	3,640	2,740	24,900
Internal consumption 2/	23,400	1,750	1,480	12,100
Gross shipments	38,000	3,110	2,810	22,300

p/ Preliminary.

1/ Data are rounded to three significant digits.

2/ Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3  
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS 1/

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb- denum 2/	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
1999, June:						
Steel:						
Carbon	30,000	23,100	--	--	3,190	56,200
High-strength low-alloy	27,000	7,990	--	--	--	35,000
Stainless and heat-resisting	283,000	43,700	--	--	4,760	332,000
Full alloy	159,000	169,000	--	--	2,330	330,000
Tool	W	5,880	--	--	1,450	7,330
Total	499,000	250,000	--	--	11,700	760,000
Cast irons (gray, malleable, and ductile iron)	W	54,000	--	--	763	54,700
Superalloys	79,700	W	--	(3/)	100,000	180,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	W	W	--	--	6	6
Other alloys	171	136	--	--	6,290	6,600
Mill products made from metal powder 4/	--	--	--	--	155,000	155,000
Cemented carbides and related products 5/	--	--	--	--	2	2
Chemical and ceramic uses:	--					
Pigments	--	--	--	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other	W	--	--	--	4,060	4,060
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,900	11,900
Other	75,000	8,040	74,200	--	14,900	172,000
Grand total	731,000	312,000	74,200	--	306,000	1,420,000
Stocks, June 30, 1999	586,000	349,000	3,480	14,800	822,000	1,780,000

See footnotes at end of table.

TABLE 3--Continued  
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS 1/

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molybdenum 2/	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
1999, July:						
Steel:						
Carbon	27,000	22,800	--	--	3,190	53,000
High-strength low-alloy	44,100	9,550	--	--	--	53,600
Stainless and heat-resisting	277,000	44,700	--	--	4,760	326,000
Full alloy	131,000	170,000	--	--	2,330	303,000
Tool	52,500	6,690	--	--	1,450	60,700
Total	531,000	253,000	--	--	11,700	796,000
Cast irons (gray, malleable, and ductile iron)	W	31,700	--	--	763	32,500
Superalloys	80,600	W	--	(3/)	101,000	182,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	W	W	--	--	6	6
Other alloys	--	74	--	--	6,290	6,360
Mill products made from metal powder 4/	--	--	--	--	175,000	175,000
Cemented carbides and related products 5/	--	--	--	--	5	5
Chemical and ceramic uses:						
Pigments	--	--	1,480	--	--	1,480
Catalysts	77,300	--	W	--	W	77,300
Other	W	--	--	--	215	215
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	25,200	25,200
Other	2,290	7,230	74,200	--	--	83,700
Grand total	692,000	292,000	75,700	--	320,000	1,380,000
Stocks, July 31, 1999	571,000	329,000	3,710	15,500	823,000	1,740,000

W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes calcium molybdate.

3/ Included in "Other" of the "Superalloys" category.

4/ Includes ingot, wire, rod, and sheet.

5/ Includes construction, mining, oil and gas, metal working machinery.

TABLE 4  
U. S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES  
(Including roasted concentrate), BY COUNTRY 1/

(Kilograms, contained molybdenum)

Country	1998	1999		
		May	June	Year to date
Australia	81,700	1,770	--	23,300
Belgium	4,470,000	337,000	277,000	2,970,000
Brazil	59,400	3,220	1,180	6,430
Canada	994,000	67,800	47,300	580,000
Chile	6,840,000	306,000	238,000	1,690,000
China	424,000	--	218,000	218,000
Germany	460,000	11,700	12,100	58,800
Italy	448,000	17,500	5,500	127,000
Japan	4,410,000	189,000	125,000	1,180,000
Korea, Republic of	8,660	--	2,710	36,500
Mexico	4,220,000	--	--	125,000
Netherlands	12,800,000	347,000	952,000	3,760,000
Spain	119,000	--	--	1,130
Sweden	894,000	35,400	12,200	304,000
United Kingdom	5,480,000	343,000	120,000	2,100,000
Other	247,000	44,700	19,200	86,900
Total	42,000,000	1,700,000	2,030,000	13,300,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 5  
U. S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY 1/

(Kilograms, contained molybdenum)

Country	1998	1999		
		May	June	Year to date
Australia	1,800	--	--	382
Canada	549,000	42,900	61,800	236,000
China	133,000	--	2,520	117,000
Japan	31,200	6,420	6,000	33,200
Korea, Republic of	1,610	--	--	327
Mexico	91,000	1,770	3,830	25,100
Other	852	599	--	599
Total	809,000	51,700	74,100	413,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS 1/

(Kilograms unless otherwise specified)

Material	1998			1999		
	January-December			June		
	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)
Ore and concentrates roasted	8,020,000	5,090,000	\$39,700	524,000	362,000	\$1,900
Ore and concentrates other	2,710,000	1,480,000	7,810	--	--	--
Molybdenum chemicals:						
Oxides and hydroxides	1,180,000	NA	9,610	111,000	NA	744
Molybdates of ammonium	1,240,000	684,000	8,980	131,000	19,400	165
Molybdates (all others)	192,000	113,000	982	15,000	5,920	675
Molybdenum orange	2,050,000	NA	7,950	157,000	NA	764
Mixtures of inorganic compounds	--	--	--	--	--	--
Ferromolybdenum	7,690,000	4,830,000	44,000	886,000	553,000	3,820
Molybdenum powders	110,000	103,000	3,210	5,800	4,900	196
Molybdenum unwrought	145,000	137,000	2,110	1,480	475	58
Molybdenum waste and scrap	296,000	292,000	4,080	45,500	42,500	579
Molybdenum wire	5,530	NA	500	446	--	35
Molybdenum other	7,850	NA	1,650	575	--	108
Total	23,700,000	12,700,000	131,000	1,880,000	988,000	9,040

NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.